

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P735894

Luminaire Tested: S122DR-S865D930-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735894
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-1)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DR-S865D930-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3101.6 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

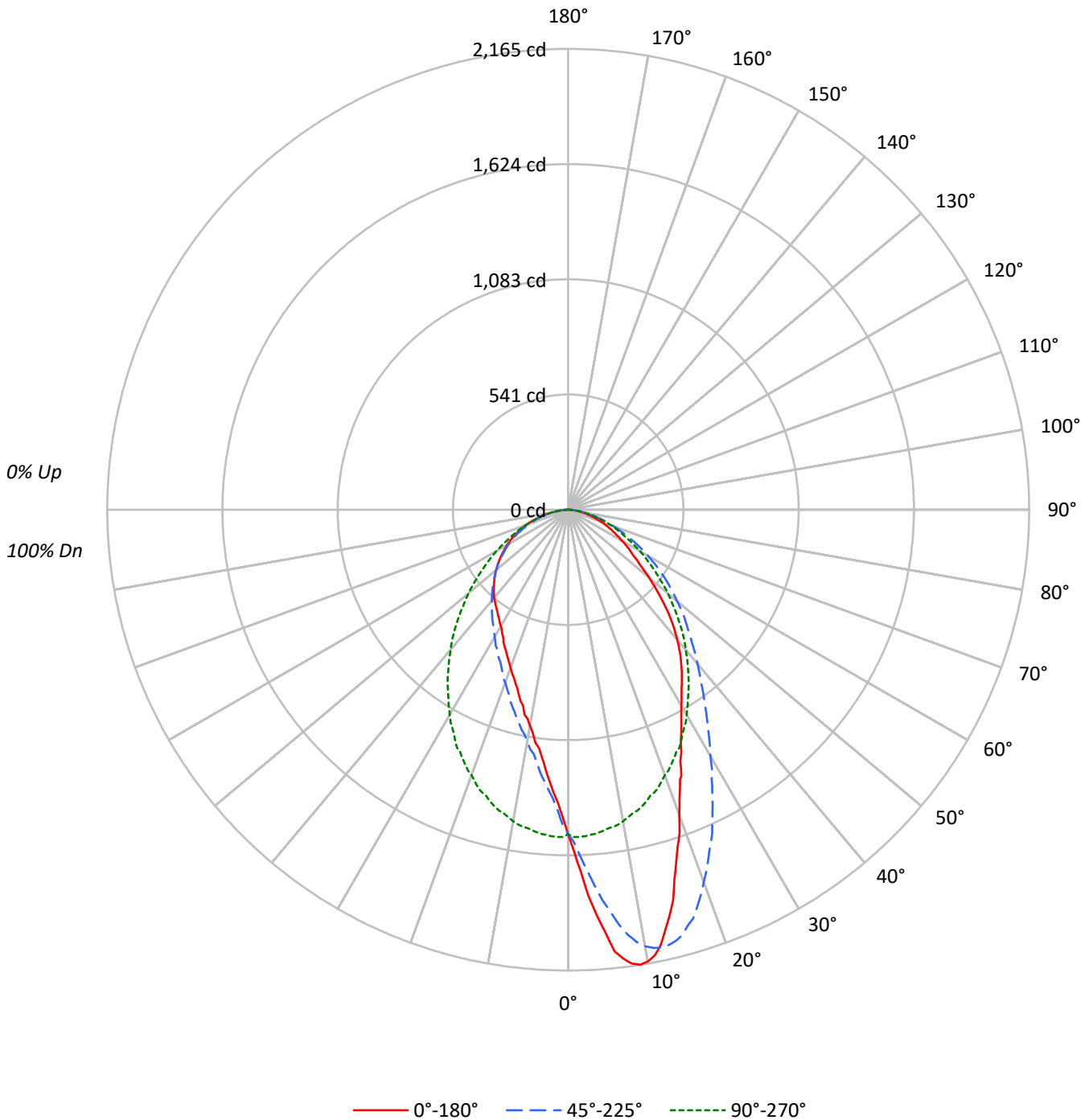
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74				74
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66	64				64
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58	56				56
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51	49				49
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46	44				44
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41	39				39
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35				35
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34	32				32
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	29301	29301	29301	29301	29301
5°	38429	35518	29453	24703	23570
10°	42063	40652	29017	21594	20121
15°	37841	41176	28229	19493	17846
20°	31224	38083	27152	17681	16180
25°	26686	33974	26197	16354	14999
30°	23602	29672	24696	15323	14045
35°	21832	26281	23157	14602	13645
40°	19980	23712	21556	13986	13565
45°	17601	21646	19936	13556	13385
50°	14820	19957	18265	13190	13220
55°	12463	18361	16501	12744	12992
60°	11237	16596	14981	12363	12728
65°	10197	14581	13344	11771	12485
70°	9183	12600	12010	10891	11836
75°	8013	10657	10271	9885	10813
80°	6730	8346	8346	8579	9043
85°	5072	5999	6241	6704	6462

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 31782 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.0	4.8
10°-20°	411.7	13.3
20°-30°	540.0	17.4
30°-40°	570.7	18.4
40°-50°	529.9	17.1
50°-60°	424.1	13.7
60°-70°	290.0	9.4
70°-80°	149.7	4.8
80°-90°	35.5	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1101.7	35.5
0°-40°	1672.4	53.9
0°-60°	2626.4	84.7
0°-90°	3101.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3101.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1524	1524	1524	1524	1524	
5°	1992	1841	1526	1280	1222	196
15°	1902	2069	1419	980	897	522
25°	1258	1602	1235	771	707	580
35°	930	1120	987	622	582	581
45°	648	796	733	499	492	497
55°	372	548	492	380	388	341
65°	224	321	293	259	274	222
75°	108	144	138	133	146	115
85°	23	27	28	30	29	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1524.4	1524.4	1524.4	1524.4	1524.4	1524.4	1524.4	1524.4	1524.4
1°	1608.2	1599.8	1563.2	1565.3	1538.0	1507.6	1479.4	1461.5	1446.9
2°	1702.5	1685.8	1628.1	1599.8	1538.0	1473.1	1414.4	1398.7	1378.8
3°	1816.7	1776.9	1697.3	1630.2	1535.9	1441.6	1361.0	1332.7	1329.5
4°	1908.9	1873.3	1767.5	1661.7	1530.7	1411.3	1320.1	1289.7	1275.1
5°	1991.7	1968.6	1840.8	1701.5	1526.5	1381.9	1280.3	1238.4	1221.6
6°	2087.0	2039.9	1899.5	1741.3	1519.2	1353.6	1244.7	1194.4	1171.3
7°	2125.8	2096.5	1965.5	1767.5	1509.7	1321.2	1199.6	1145.1	1128.4
8°	2153.0	2141.5	2017.9	1810.4	1505.5	1290.8	1159.8	1126.3	1106.4
9°	2164.6	2155.1	2055.6	1828.2	1498.2	1275.1	1139.9	1084.4	1062.4
10°	2155.1	2159.3	2082.8	1855.5	1486.7	1242.6	1106.4	1058.2	1030.9
11°	2133.1	2143.6	2097.5	1886.9	1472.0	1216.4	1076.0	1026.7	1000.6
12°	2091.2	2114.3	2103.8	1908.9	1458.4	1193.3	1055.0	1007.9	984.8
13°	2026.3	2077.6	2099.6	1918.3	1450.0	1167.1	1028.8	974.4	945.0
14°	1967.6	2021.0	2088.1	1939.3	1435.4	1137.8	1004.7	950.3	925.1
15°	1901.6	1963.4	2069.2	1945.6	1418.6	1113.7	979.6	919.9	896.8
16°	1809.4	1892.2	2034.6	1952.9	1398.7	1086.5	956.6	900.0	869.6
17°	1732.9	1822.0	2008.4	1957.1	1388.2	1065.5	936.6	869.6	849.7
18°	1662.7	1763.3	1961.3	1954.0	1371.4	1041.4	907.3	847.6	828.7
19°	1607.2	1688.9	1914.2	1946.6	1348.4	1018.4	885.3	831.9	809.9
20°	1526.5	1620.8	1861.8	1943.5	1327.4	997.4	864.4	809.9	791.0
21°	1459.5	1555.8	1813.6	1933.0	1312.8	977.5	848.6	788.9	772.2
22.5°	1371.4	1456.3	1732.9	1913.1	1280.3	944.0	814.1	769.0	746.0
23°	1361.0	1433.3	1711.9	1906.8	1270.9	936.6	802.5	757.5	738.6
24°	1295.0	1371.4	1662.7	1886.9	1246.8	913.6	783.7	743.9	721.9
25°	1258.3	1321.2	1601.9	1868.1	1235.2	892.6	771.1	726.1	707.2
26°	1207.0	1279.2	1547.5	1840.8	1210.1	873.8	751.2	710.3	692.5
27°	1169.2	1230.0	1490.9	1820.9	1180.8	853.9	735.5	694.6	672.6
28°	1132.6	1191.2	1436.4	1788.4	1159.8	831.9	724.0	681.0	660.1
29°	1094.9	1146.2	1392.4	1763.3	1139.9	813.0	706.2	663.2	643.3
30°	1063.4	1110.6	1336.9	1729.8	1112.7	791.0	690.4	650.6	632.8
32.5°	991.1	1030.9	1223.7	1650.1	1047.7	747.0	652.7	616.0	605.6
35°	930.4	956.6	1120.0	1561.1	986.9	699.9	622.3	586.7	581.5
37.5°	866.5	891.6	1025.7	1467.8	923.0	656.9	587.8	564.7	560.5
40°	796.3	829.8	945.0	1375.6	859.1	615.0	557.4	539.6	540.6
42.5°	726.1	764.8	866.5	1267.7	799.4	575.2	528.0	515.5	517.6
45°	647.5	696.7	796.3	1169.2	733.4	537.5	498.7	492.4	492.4
47.5°	565.8	628.6	735.5	1067.6	670.5	499.8	470.4	466.2	468.3
50°	495.6	552.1	667.4	969.1	610.8	465.2	441.1	440.0	442.1
52.5°	426.4	483.0	607.7	876.9	550.0	433.7	412.8	412.8	414.9
55°	371.9	415.9	547.9	780.5	492.4	397.1	380.3	383.5	387.7
57.5°	334.2	363.6	489.3	688.3	439.0	361.5	351.0	353.1	358.3
60°	292.3	315.4	431.7	603.5	389.7	326.9	321.6	325.8	331.1
62.5°	254.6	274.5	377.2	527.0	336.3	293.4	291.3	297.5	302.8
65°	224.2	237.8	320.6	449.5	293.4	259.8	258.8	268.2	274.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	192.8	203.3	271.4	376.1	250.4	226.3	226.3	236.8	242.0
70°	163.4	171.8	224.2	310.1	213.7	192.8	193.8	206.4	210.6
72.5°	133.1	140.4	182.3	249.4	172.9	161.3	164.5	175.0	179.2
75°	107.9	113.2	143.5	197.0	138.3	128.9	133.1	142.5	145.6
77.5°	82.8	87.0	105.8	144.6	105.8	100.6	104.8	113.2	113.2
80°	60.8	61.8	75.4	101.6	75.4	72.3	77.5	81.7	81.7
82.5°	39.8	41.9	49.2	65.0	50.3	49.2	51.3	54.5	54.5
85°	23.0	24.1	27.2	35.6	28.3	28.3	30.4	30.4	29.3
87.5°	9.4	10.5	11.5	13.6	12.6	13.6	13.6	11.5	12.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)